

### REMARKS

Applicant submits that this response presents claims in better form for consideration on appeal. Moreover, applicants submit that this response responds to at least one argument that was first presented in the Office Action mailed March 24, 2004. Applicant submits that thus there is a good and sufficient reason why this response is necessary, why this response was not earlier presented, and why this response should be considered now. Furthermore, applicants believe that consideration of this response could lead to favorable action that would remove one or more issues for appeal.

### Office Action Rejections Summary

Claims 19-21, 23-24, 26-29, and 32-35 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,815,427 of Cloud et al. ("Cloud") in view of U.S. Patent No. 6,021,469 of Tremblay ("Tremblay").

Claims 22, 30-31 and 36-38 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Cloud.

### Status of Claims

Claims 19-24 and 26-38 are pending in the application. No claims have been amended. No claims have been added. No new matter has been added. No claims have been canceled.

### Rejection of Claims 19-21, 23-24, 26-29 and 32-35

Claims 19-21, 23-24, 26-29 and 32-35 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Cloud in view of Tremblay. Each of claims 19, 26 and 32 recites "wherein the memory storage and the three different interfaces reside in a common die." Applicant submits that each of claims 19, 26 and 32 are patentable over the cited references at least for the reasons set forth below.

The Programming of Module 14 and the BIST Circuitry of Module 14 of Cloud  
Are NOT Programming and Test Interfaces.

Applicant respectfully submits that the Office Action's analysis of a purported "test interface" and "programming interface" of Cloud is incorrect. The Office Action cites to col. 5, lines 45-48 of Cloud and mischaracterizes the disclosure therein as a "programming interface." The col. 5, lines 45-48 passage of Cloud refers to the programming of the I/O select circuit 55 in conventional manners (e.g., laser fuses, antifuses, etc.) to couple an appropriate one of the I/O circuits to the output bus 56. This is not a "programming interface" but, rather, the programming of the select circuit to be configured to provide a particular interface to memory module 12.

Furthermore, the Office Action mischaracterizes the BIST circuit 77 of Figure 6 as a "test interface" and cites to col. 6, lines 44-47 of Cloud in support thereof. It is submitted that the col. 6, lines 44-47 passage of Cloud refers to a "**circuit**" *for testing the interface circuitry* on module 14. As can be seen by Figure 6, BIST circuit 77 is coupled to the input buffers 74 and output drivers 76 in order to test these buffers and drivers. As such, BIST 77 is not an interface itself, test or otherwise, but rather a circuit to test the interface circuitry (input buffers 74 and output drivers 76).

The Teachings of Trembly Cannot Be Combined With Cloud

It is respectfully submit that **the Examiner has not addressed the applicant's previous argument** that the teaching of Trembly cannot be combined with Cloud because (1) modifying Cloud to put the memory storage and the different interfaces on a common die would require substantial reconstruction and redesign of the elements shown in Cloud as well a change in the basic principle under which the **modular** architecture of Cloud was designed to operate. See MPEP 2143.01, *In re Ratti*, 270 F.2d. 810 (CCPA 1959), and (2) Cloud teaches away from integration of component functions. (See

Applicant's Response to Office Action, 12/18/03, pages 8-9). In particular, Cloud teaches away from integration of component functions by stating that custom integrated circuits may be difficult and costly to produce. (Cloud, col. 1, lines 56-58). One of the advantages stated by Cloud of the modularity of its invention is the ability to form circuits from partially defective modules. (Cloud, col. 2, lines 15-16). This further evidences that one of skill in the art, *confronted with the same problems as the inventor of Cloud* and with no knowledge of the applicant's invention, would not combine elements from Tremblay with Cloud in the manner purported by the Office Action to put memory storage and three different interfaces on a common die. See *In re Rouffet*, 149 F.3d 1350 (Fed. Cir. 1998). **Applicant respectfully requests the Examiner to address this argument in the next office action if the Examiner continues to purport there is a motivation to combine the cited references.**

In contrast, claims 19, 26 and 32 recite what is **contrary to the understandings and expectations of Cloud** and, therefore, are patentable over a combination of Cloud and Tremblay. See MPEP 2144.04; *Schenck v. Norton Corp.*, 713 F.2d 782 (Fed. Cir. 1983).

Therefore, applicant submits that each of claims 19, 26, and 32 (and their dependent claims) are patentable over the cited references. Given that claims 22, 30-31 and 36-37 depend from a respective one of claims 19, 26 and 32, applicant submits that claims 22, 30-31 and 36-37 are patentable over the cited references for reasons given above.

#### **Rejection of Claim 38**

Claim 38 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Cloud. Applicant submits that claim 38 is patentable over the cited reference. Claim 38 recites:

A memory device, comprising a plurality of different interfaces to operate the memory device in a plurality of different modes, **wherein the memory device is a flash memory** and wherein **one of the plurality of interfaces is a standard flash memory interface**.

(emphasis added)

Applicant appreciates the addressing of applicant's argument with respect to claim 38, but respectfully submits that the Office Action's analysis is inapposite for at least the following reasons:

Impermissible Broadening of Cloud Teaching

First, it is respectfully submit that the Office Action is impermissibly reading Cloud to teach something broader than what is actually taught or suggest by the Cloud. Cloud teaches that "[i]n one embodiment of the invention, the memory device 10 is a synchronous dynamic random access memory (SDRAM), although in other embodiments, the memory device 10 may be **another** type of memory device." (Cloud, col. 6 lines 3-6)(emphasis added)

The Office Action states:

Cloud clearly indicates that **another** type of memory device can be used (col. 6, lines 3-7), other type of memory device include the flash memory since the flash memory has the advantage of keeping the content of data stored even the power to the memory is off.

(Office Action, 3/24/04, page 8)(emphasis added)

Cloud does not disclose, teach or suggest that "**all**" types or "**any**" type of memory device can be used. Rather, Cloud's statement that merely "another" type of memory device can be used, coupled with its explicit teaching of volatile type memory devices limits the teaching and suggestion of Cloud to another volatile type memory devices other than the previously described SRAM embodiment memory device that loses its stored data when power to the memory is removed (e.g., a DRAM). It is respectfully submitted

that Cloud cannot be read to disclose, teach or suggests something beyond what is explicitly or implicitly disclosed, taught or suggested by the reference itself.

Claim 38 Was Not Rejected Using U.S. Patent 6125423 of Yamada

The Office Action asserts:

Cloud clearly indicates that another type of memory device can be used (col. 6, lines 3-7), other type of memory device include the flash memory since the flash memory has the advantage of keeping the content of data stored even the power to the memory is off, this advantage is **taught in Yamada's reference**, U.S. Patent 6125423. (col. 1, lines 19-23).

(Office Action, 3/24/04, pages 8-9)(emphasis added)

It is respectfully submitted that claim 38, in the Office Action of 3/24/04, was not rejected using U.S. Patent 6125423 of Yamada ("Yamada") and, therefore, Yamada cannot be used in the analysis for the rejection of claim 38. Specifically, the Office Action of 3/24/04 states that claim 38 "is rejected under 35 U.S.C. §103(a) as being unpatentable over Cloud et al., U.S. Patent 5815427." (Office Action, page 6). If the Examiner is attempting to issue a new rejection of claim 38 as being obvious over Cloud in view of Yamada, then it is respectfully submitted that the Examiner need to do such explicitly. Moreover, such would be a new ground of rejection not necessitated by applicant amendment and, therefore, applicant requests that **the finality of the office action be withdrawn**.

No Motivation to Combine Yamada, or any Flash Memory Teaching, with Cloud

It is respectfully submitted that the Office Actions has not provided a motivation to combine Yamada with Cloud. The Office Action states:

as one may noted above, "obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge

generally available to one of ordinary skill in the art", **the motivation of using SDRAM (cost effectiveness) can be different than the motivation of using flash memory (keeping the content of data stored even the power to the memory is off)**, therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the flash memory device instead of SDRAM for the advantage as noted above.

(Office Action, 3/24/04, page 9)(emphasis added)

The Office Action refers to a purported advantage taught in Yamada as a motivation to combine the cited references and states that there can be *different motivations*. **It is respectfully submitted that there can only be either a motivation to combine references or no motivation to combine references.** Applicant has demonstrated that there would be no motivation to modify Cloud to use a flash memory device regardless of what is taught in Yamada. As previously stated, one of the problems confronting the inventors of Cloud, and advantages of the teachings of Cloud, is cost effectiveness. (Cloud, col. 2, lines 1-16). The types of memory devices that Cloud discloses are inexpensive volatile memory devices that lose their stored data when power to the memory is removed. In contrast, a flash memory device is a non-volatile memory device that retains the contents of data stored within it even after power to the memory is removed. Such a technological feature tends to make flash memory more expensive than volatile memory devices such as the SDRAM and DRAM devices taught by Cloud. As such, one of skill in the art would not be motivated to look to flash memory devices for solutions to the problems facing the inventors of Cloud due the cost prohibition of flash memory devices **in achieving a cost effective solution as required by Cloud**. As such, it would not be obvious to combine a flash memory with the teachings of Cloud. Therefore, applicant respectfully submits that claim 38 is patentable over Cloud.

In conclusion, applicant respectfully submits that in view of the arguments set forth herein, the applicable rejections have been overcome.

If the Examiner believes a telephone interview would expedite the prosecution of this application, the Examiner is invited to contact Daniel Ovanezian at (408) 720-8300.

If there are any additional charges, please charge our Deposit Account No. 02-2666.

Respectfully submitted,

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Dated: 4/15, 2004



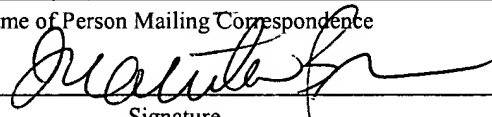
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